

## REMARKS

### I. Summary of Office Action

Claims 1-20 are pending in the application.

The Examiner acknowledged applicants' priority claim to Provisional Patent Application Nos. 60/179,884 and 60/216,403, filed on February 2, 2000 and July 6, 2000, respectively.

The Examiner also acknowledged consideration of the references cited in applicants' Information Disclosure Statements of August 27, 2001, March 1, 2002, and January 13, 2003 in connection with this application.

The disclosure was objected to by the Examiner because the specification references several related patent applications without stating the current status or identification numbers of these applications.

The Examiner provisionally rejected claims 1-20 under the judicially created doctrine of double patenting over claims 1-40 of co-pending Patent Application No. 09/775,347.

Claims 1-20 were rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over various combinations of U.S. Patent No. 5,870,564 to Jensen et al. (hereinafter, "Jensen"), U.S. Patent No. 5,655,134 to Yamazaki (hereinafter, "Yamazaki"), U.S. Patent No. 6,112,249 to Bader et al. (hereinafter, "Bader"), and U.S. Patent No. 6,490,451 to Denman et al. (hereinafter, "Denman").

### II. Summary of Applicants' Reply

Amendments to the specification and the drawings have been proposed by applicants in order to correct certain typographical errors. No new matter would be added by these amendments to the specification and drawings.

Applicants have amended claims 1, 3, 8, 11, and 18 in order to more particularly define the present invention. No new matter has been added by these amendments to the claims.

A terminal disclaimer is submitted herewith in response to the provisional rejection of claims 1-20 under the judicially created doctrine of double patenting over claims 1-40 of co-pending Patent Application No. 09/775,347.

The Examiner's rejections under 35 U.S.C. § 103(a) are respectfully traversed.

Reconsideration of this application is respectfully requested.

### III. The Amendments to the Specification

Applicants propose amending the specification to correct certain typographical errors as set forth in the following table. These proposed amendments are fully supported and justified by the original specification and drawings. Applicants respectfully request that the Examiner enter these proposed amendments to the specification.

Page(s), paragraphs	Change From	Change To	Justification
Page 1, paragraph 0002	09/____; 09/____; 09/____; and 09/____	09/775,347; 09/775,348; 09/775,350; and 09/775,346	Clerical/ Typographical
Pages 11-12, paragraph 0021	different local root Node that Nodes A and B	different local root Node than Nodes A and B	Typographical
Page 16, paragraph 0030	FIG. 1 shows an example of a typical prior end network	FIG. 1 shows an example of a typical prior art network	Typographical
Page 16, paragraph 0030	FIG. 2 shows an example of a typical prior end network	FIG. 2 shows an example of a typical prior art network	Typographical
Page 17, paragraph 0034	a conventional computer stations	a conventional computer station 30	Typographical
Pages 17-18, paragraph 0035	(EAG))	(EAG)	Typographical
Pages 17-18, paragraph 0035	i.e. an imaginary node	i.e., an imaginary node	Typographical
Pages 17-18, paragraph 0035	(i.e. it's coordinate label)	(i.e., it's coordinate label)	Typographical
Pages 17-18, paragraph 0035	being routed according to from a Node	being routed from a Node	Typographical
Pages 20-21, paragraph 0040	Node, X	Node, X,	Typographical
Page 22, paragraph 0045	if Figure 3	in Figure 3	Typographical
Page 39, paragraph 0080	having end Nodes N1 and N2	having end Nodes E1 and E2	Typographical
Pages 39-40, paragraph 0081	A though H	A through H	Typographical
Pages 39-40, paragraph 0081	Nods	Nodes	Typographical
Pages 39-40, paragraph 0081	network) It may	network), it may	Typographical
Pages 39-40, paragraph 0081	links S1, and S2	links S1 and S2	Typographical
Pages 39-40, paragraph 0081	network) it can	network), it can	Typographical

#### **IV. The Amendments to the Drawings**

Applicants propose amending FIGS. 3 and 5 to correct typographical errors in each. More particularly, in FIG. 3, applicants propose changing “21, 231, 3131, 412131” located to the left of node “G” to “12, 231, 3131, 412131.” This change is supported by FIG. 3 as originally filed, as well as by the table provided in page 21, paragraph 42 of the specification. Applicants also propose amending FIG. 5 by changing “2 3” to “2.3” and by adding a box labeled “V” as shown. These proposed changes are to correct typographical errors, and are supported by FIG. 5 as originally filed, as well as by page 25, paragraph 51 of the specification.

In accordance with 37 C.F.R. § 1.121, replacement sheets of the drawings containing FIGS. 3 and 5, as well as the other figures, are enclosed herewith.

Applicants respectfully request that the Examiner enter these amendments to the drawings.

#### **V. The Amendments to the Claims**

Applicants have amended claims 1, 3, 8, 11, and 18 as indicated in the Listing of Claims that begins on page 7 of this paper. These amendments have been made in order to more particularly define the present invention.

The amendments to these claims are fully supported and justified by the specification and drawings as originally filed. No new matter has been added.

#### **VI. The Terminal Disclaimer**

Pursuant to 37 C.F.R. §1.321(c), applicants submit herewith a Terminal Disclaimer in response to the provisional rejection of claims 1-20 under the judicially created doctrine of double patenting over claims 1-40 of co-pending Patent Application No. 09/775,347. Therefore, applicants respectfully request that the provisional rejection of claims 1-20 be withdrawn by the Examiner.

**VII. The Rejections of Independent Claims 1, 3, 8, 11, 16, and 18 Under 35 U.S.C. §103(a)**

Each of the pending claims, including independent claims 1, 3, 8, 11, 16, and 18, were rejected by the Examiner under 35 U.S.C. § 103(a). The Examiner's rejections of the claims under 35 U.S.C. § 103(a) are respectfully traversed.

Applicants respectfully submit that, contrary to the Examiner's contention, each of independent claims 1, 3, 8, 11, 16, and 18 are allowable for at least the following reasons.

**A. Independent Claims 1, 3, 8, and 11 are Allowable Over the Cited References**

The Examiner rejected each of independent claims 1, 3, 8, and 11 under 35 U.S.C. § 103(a) as being unpatentable over some combination of Denman, Jensen, and Yamazaki. In particular, the Examiner rejected claims 1 and 8 as being unpatentable over Jensen in view of Yamazaki, and rejected claims 3 and 11 as being unpatentable over Jensen in view of Yamazaki in further view of Denman. The Examiner's rejections of independent claims 1, 3, 8, and 11 are respectfully traversed by applicants.

Generally speaking, the invention defined by independent claims 1, 3, 8, and 11 relates to a network that includes a plurality of Nodes interconnected by Links. As amended, each of independent claims 1, 3, 8, and 11 requires that a network according to the invention conform to the following three requirements (emphasis added):

each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes;

each coordinate label is unique to the Node to which it is assigned; and

a path between a first Node and a second, non-adjacent Node being determined from one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node.

An example of a network that conforms to these three requirements is illustrated in applicants' FIG. 3 (described in the specification at pages 19-22). The network shown in FIG. 3 includes eight Nodes A, B, C, D, E, F, G, and H interconnected by Links that are labeled with one of Link Labels 1, 2, 3, or 4. In accordance with the first common element of claims 1, 3, 8, and 11 stated above, each of Nodes A-H is assigned one or more coordinate labels that each represent a particular path (in this example, to Node A). For example, as shown in FIG. 3, Node C includes coordinate labels 31, 212, 1312, and 121412 that each represent a path to Node A. As another

example, Node H includes coordinate labels 2, 1231, 13131, and 1412131 that also each represent a particular path (again, to Node A). Moreover, in accordance with the third common element of amended claims 1, 3, 8, and 11 stated above, a path between a first Node (e.g., Node H) and a second, non-adjacent Node (e.g., Node C) is determined from one of the coordinate labels assigned to Node H and one of the coordinate labels assigned to Node C. For example, as shown in FIG. 3 and as explained above, 1231 is a coordinate label for Node H, and 31 is a coordinate label for Node C. In accordance with the invention, a path, 12, may be determined from Node H to Node C by removing the common suffix 31 and combining the remainder of these two coordinate labels.

Even in combination, the references relied upon by the Examiner in rejecting each of claims 1, 3, 8, and 11 fail to show or suggest all three common elements of these claims. For example, for at least the foregoing reasons, neither Denman, Jensen, nor Yamazaki, alone or in combination, shows or suggests the third common element of “a path between a first Node and a second, non-adjacent Node being determined from one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node” (claims 1, 3, 8, and 11, emphasis added).

Denman relates to a system and method for providing packet-switched telephony. However, Denman does not disclose at least the third common element of claims 1, 3, 8, and 11 (nor has the Examiner even suggested anywhere in the Office Action that it does). In particular, nowhere in the entirety of Denman is there disclosed a network comprising a plurality of Nodes interconnected by Links where “a path between a first Node and a second, non-adjacent Node [is] determined” using a coordinate label of the first Node and a coordinate label of the second Node (as required by each of claims 1, 3, 8, and 11).

Jensen seeks to provide a method and apparatus for dynamically providing a path through a network of nodes or granules. As admitted by the Examiner on page 3 of the Office Action, however, Jensen does not disclose a network comprising a plurality of Nodes interconnected by Links where “a path between a first Node and a second, non-adjacent Node [is] determined” using a coordinate label of the first Node and a coordinate label of the second Node (as required by each of claims 1, 3, 8, and 11).

Contrary to the Examiner’s contention in the Office Action (see, e.g., page 4 of the Office Action), Yamazaki also fails to disclose the third common element of applicants’ claims 1, 3, 8,

and 11. For example, nowhere in Yamazaki (including column 2, lines 5-62, which the Examiner referenced on page 4 of the Office Action while rejecting claim 1) is it disclosed that a path between a first Node and a second, non-adjacent Node can be determined from respective coordinate labels. Rather, as described above and throughout Yamazaki, the link information in Yamazaki merely discloses the next node number N of each link number L. For example, as illustrated by FIG. 2(b) of Yamazaki, stored link information can be used to determine that Link 2 (and the next Node, which is also numbered “2” in order to reduce memory requirements) directly connects to Node 1. However, unlike with applicants’ claimed invention, there is no coordinate label or other piece of information disclosed in Yamazaki that is assigned to the respective Nodes, and that can be used to determine paths between such Nodes and other, non-adjacent Nodes (e.g., a path between the non-adjacent Nodes numbered “5” and “1” in FIG. 2(a) of Yamazaki).

Accordingly, applicants respectfully request that the rejection of claims 1, 3, 8, and 11, and claims 2, 4-7, 9-10, and 12-15 which depend from one of allowable claims 1, 3, 8, and 11, be withdrawn by the Examiner.

**B. Independent Claim 16 is Allowable Over Jensen and Yamazaki**

The Examiner rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Jensen in view of Yamazaki. Applicants respectfully traverse the Examiner’s rejection.

Generally speaking, applicants’ invention as defined by independent claim 16 relates to a method for determining a path from a source Node to a destination Node in a network that includes a single first Node and a plurality of second Nodes (where the source and destination Nodes are considered second Nodes) that are interconnected by Links. In particular, as defined by claim 16, the method requires performing each of the following steps (emphasis added):

assigning to each of said second Nodes, including said source Node and said destination Node, one or more coordinate labels, each coordinate label assigned to a second Node representing a path through said network from said second Node to said first Node;

determining a path from said source Node to said destination Node by combining one coordinate label of said source Node and one coordinate label of said destination Node; and

at one of said second Nodes, storing one or more coordinate labels of a second Node adjacent to said one second Node.

The network shown in applicants' FIG. 3 is one such network that includes a "first Node" (i.e., Node A) and a plurality of "second Nodes" (i.e., Nodes B, C, D, E, F, G, and H) according to the invention, where each "second Node" B through H is assigned one or more coordinate labels representing a path to the "first Node" A. For example, as shown in applicants' FIG. 3, coordinate labels 31, 212, 1312, and 121412 of Node C (a "second Node") each represent a path to the "first Node" A. Similarly, coordinate labels 2, 1231, 13131, and 1412131 of Node H (another "second Node") also each represent a path to the "first Node" A. Similar coordinate labels, representing paths to Node A, are also assigned to the remainder of the "second Nodes" (i.e., to Nodes B, D, E, F, and G) shown in FIG. 3 in accordance with the claimed invention.

In addition, in accordance with the second element of claim 16 reproduced above, a path from a source Node (e.g., Node H) to a destination Node (e.g., Node C) is determined by combining a coordinate label from each Node, where both of these coordinate labels represent respective paths for the source Node (e.g., Node H) and the destination Node (e.g., Node C) to the "first Node" of the network (which, in FIG. 3, is Node A). For example, as shown in FIG. 3 and as explained above, 1231 is a coordinate label for Node H (a "second Node") that represents a path to Node A (the "first Node" in the network), and 31 is a coordinate label for Node C (another "second Node") that represents a path to Node A (the "first Node"). Using these coordinate labels, in accordance with the invention defined by claim 16, a path between Nodes H and C (i.e., 12) may be determined by removing the common suffix 31 and combining the remainder of these two coordinate labels.

Contrary to the Examiner's suggestion on page 5 of the Office Action, unlike the claimed invention, Yamazaki does not disclose (1) assigning coordinate labels to "second Nodes" (i.e., all the Nodes except for a single "first Node"), where the coordinate labels each represent a path to the first Node, and (2) determining a path between a source Node and a destination Node (neither of which is the same Node as the "first Node") by using such coordinate labels. First, referring for example to FIG. 2(a) of Yamazaki, assuming that Node 1 is the "first Node," and that the remainder of the Nodes (i.e., Nodes 2, 3, 4, 5, and 6) are the "second Nodes," nowhere in Yamazaki is it disclosed that coordinate labels representing paths to Node 1 be assigned to each of Nodes 2 through 6. Second, Yamazaki does not disclose determining a path between two "second Nodes" using one coordinate label from each that represents a path to another Node (the "first Node"). For example, referring again to FIG. 2(a) of Yamazaki, assume that Node 1 is the

“first Node,” and that Nodes 6 and 2 are the source and destination Nodes, respectively.

Nowhere in Yamazaki is it disclosed that a path from Node 6 to Node 2 can be determined using a coordinate label from each, where these coordinate labels represent respective paths to Node 1.

For at least the foregoing reasons, independent claim 16 is allowable over Yamazaki. Moreover, Jensen does not provide that which is missing from Yamazaki.

Accordingly, applicants respectfully submit that claim 16 is allowable over the combination of Jensen and Yamazaki, and request that the rejection of claim 16, and claim 17 which depends from claim 16, be withdrawn by the Examiner.

**C. Independent Claim 18 is Allowable Over Jensen and Yamazaki**

The Examiner rejected claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Jensen in view of Yamazaki. Applicants respectfully traverse the Examiner’s rejection.

Generally speaking, applicants’ invention as defined by independent claim 18 relates to a Node for use in a network. As required by claim 18, as amended, the Node “has one or more coordinate labels assigned thereto, each coordinate label representing a path from said Node to a particular other, non adjacent Node of [the] network” (emphasis added).

Contrary to the Examiner’s assertion on page 5 of the Office Action, for at least the same reasons as set forth above in connection with claims 1, 3, 8, and 11, applicants respectfully submit that neither Jensen nor Yamazaki, alone or in combination, shows or suggests assigning coordinate labels to Nodes in a network that represent paths from the Nodes to non-adjacent Nodes in the network.

Accordingly, applicants respectfully request that, for at least the reasons advanced above in connection with claims 1, 3, 8, and 11, the rejection of claim 18, and claims 19-20 which depend from claim 18, be withdrawn by the Examiner.

**VIII. The Rejections of Dependent Claims 2, 4-7, 9-10, 12-15, 17, and 19-20 Under 35 U.S.C. § 103(a)**

The Examiner rejected each of dependent claims 2, 4-7, 9-10, 12-15, 17, and 19-20 under 35 U.S.C. § 103(c) as being unpatentable over some combination of Bader, Denman, Jensen, and Yamazaki. Applicants respectfully traverse the Examiner’s rejections.



Applicants respectfully submit that claims 2, 4-7, 9-10, 12-15, 17, and 19-20, each of which depends from one of independent claims 1, 3, 8, 9, 11, 16, and 18, are allowable for at least the same reasons that the independent claims are patentable as set forth above. Therefore, applicants respectfully request that the Examiner withdraw the rejections of claims 2, 4-7, 9-10, 12-15, 17, and 19-20.

#### **IX. Petition For Extension Of Time**

Applicants have submitted herewith a petition for a three-month extension of time for responding to the Office Action mailed on July 30, 2004. The Director is hereby authorized to charge any additional fees which may be required for this response, or credit any overpayment, to deposit account no. 08-0219.

#### **X. Conclusion**

Applicants respectfully submit that, as described above, the cited references do not show or suggest the combination of features recited in the claims. Applicants do not concede that the cited references show any of the elements recited in the claims. However, applicants have provided specific examples of elements in the claims that are clearly not present in the cited prior art.

Applicants strongly emphasize that one reviewing the prosecution history should not interpret any of the examples applicants have described herein in connection with distinguishing over the prior art as limiting to those specific features in isolation. Rather, applicants assert that it is the combination of elements recited in each of the claims, when each claim is interpreted as a whole, which is patentable. Applicants has emphasized certain features in the claims as clearly not present in the cited references, as discussed above. However, applicants do not concede that other features in the claims are found in the prior art. Rather, for the sake of simplicity, applicant are providing examples of why the claims described above are distinguishable over the cited prior art.

Applicant wishes to clarify for the record, if necessary, that the claims have been amended to expedite prosecution. Moreover, applicant reserve the right to pursue the original subject matter recited in the present claims in a continuation application.

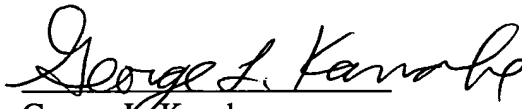
Any narrowing amendments made to the claims in the present Reply are not to be construed as a surrender of any subject matter between the original claims and the present claims; rather merely applicants' best attempt at providing one or more definitions of what the applicants believe to be suitable patent protection. In addition, the present claims provide the intended scope of protection that applicant are seeking for this application. Therefore, no estoppel should be presumed, and applicants' claims are intended to include a scope of protection under the Doctrine of Equivalents.

Further, applicants hereby retract any arguments and/or statements made during prosecution that are rejected by the Examiner during prosecution and/or that are unnecessary to obtain allowance, and only maintain the arguments that persuade the Examiner with respect to the allowability of the patent claims, as one of ordinary skill would understand from a review of the prosecution history. That is, applicants specifically retract statements that one of ordinary skill would recognize from reading the file history as not necessary, not used and/or rejected by the Examiner in allowing the patent application.

For at least the reasons set forth above, applicants respectfully submit that this application, as amended, is in condition for allowance. Reconsideration and prompt allowance of the application are respectfully requested.

Respectfully submitted,  
WILMER CUTLER PICKERING  
HALE AND DORR LLP

Date: 01/31/05

  
George L. Kanabe  
Registration No. 51,858  
Agent for Applicants

Wilmer Cutler Pickering Hale and Dorr LLP  
399 Park Avenue  
New York, NY 10022  
Tel. 212-230-8800  
Fax. 212-230-8888  
Customer No. 28089